

PENDING CLAIMS

47. A method for screening candidate compounds capable of inhibiting HMGI biological activity which comprises the steps of:

- a) immobilizing an HMGI protein, or a fragment thereof, on a solid surface;
- b) incubating the HMGI protein, or a fragment thereof, with a candidate compound under conditions which promote optimal interaction; and
- c) identifying candidate compounds which bind to the HMGI protein, or a fragment thereof; and
- d) measuring the binding affinity of the candidate compounds in step (c);
- e) transfecting into a cell a DNA construct which contains a reporter gene under the control of an HMGI protein-regulated promoter;
- f) administering to the cell a candidate compound from step (c);
- g) measuring the levels of reporter gene expression in the presence and absence of the candidate compound; and
- h) determining from the levels of reporter gene expression which candidate compounds modulate the HMGI biological activity.

48. The method according to claim 47, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 10%.

49. The method according to claim 48, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 25%.

50. (New) A method for screening candidate compounds capable of inhibiting HMGI biological activity comprising the steps of:

- a) transfecting into a cell a DNA construct which contains a reporter gene under the control of an HMGI protein-regulated promoter;
- b) administering to the cell a candidate compound;
- c) measuring the levels of reporter gene expression in the presence and absence of the candidate compound; and
- d) determining from the levels of reporter gene expression which candidate compounds modulate the HMGI biological activity.

51. (New) The method of claim 50, wherein the candidate compound is identified using binding assay screening techniques that include HMGI protein or fragments thereof.

52. (New) The method of claim 51, wherein the binding assay screening techniques include, HPLC, SPR, microwell plate assays, and high-throughput screening assays.

53. (New) The method according to claim 50, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 10%.

54. (New) The method according to claim 50, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 25%.

55. (New) A method for screening candidate compounds capable of inhibiting HMGI biological activity comprising the steps of:

- a) immobilizing an HMGI protein, or a fragment thereof, on a solid surface, wherein the fragment includes a biologically active region of the HMGI protein;
- b) incubating the HMGI protein, or the fragment thereof, with a candidate compound under conditions which promote optimal interaction;
- c) identifying whether the candidate compound binds to the HMGI protein, or the fragment thereof; and

d) determining whether the candidate compound modulates HMGI biological activity from its ability to bind to the HMGI protein, or the fragment thereof.

56. (New) A method for screening candidate compounds capable of inhibiting HMGI biological activity comprising the steps of:

- a) immobilizing an HMGI protein on a solid surface;
- b) incubating the HMGI protein with a candidate compound under conditions which promote optimal interaction;
- c) identifying whether the candidate compound binds to the HMGI protein; and
- d) determining whether the candidate compound modulates HMGI biological activity from its ability to bind to the HMGI protein.

57. (New) A method for screening candidate compounds capable of inhibiting HMGI biological activity which comprises the steps of:

- a) immobilizing an HMGI protein on a solid surface;
- b) incubating the HMGI protein with a candidate compound under conditions which promote optimal interaction;
- c) identifying candidate compounds which bind to the HMGI protein;
- d) transfecting into a cell a DNA construct which contains a reporter gene under the control of an HMGI protein-regulated promoter;
- e) administering to the cell a candidate compound from step (c);
- f) measuring the levels of reporter gene expression in the presence and absence of the candidate compound; and
- g) determining from the levels of reporter gene expression which candidate compounds modulate the HMGI biological activity.

58. (New) The method according to claim 57, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 10%.

59. (New) The method according to claim 57, wherein the candidate compound inhibits HMGI biological activity in the amount of at least 25%.